

Claims

1. A device for measuring a usage of system resources in  
a communication network, said device comprising
- 5        means for measuring which radio resources are used  
by a transmission in a system;
- means for measuring which data service units are  
used for said transmission in a system; and
- means for measuring which transmission
- 10 characteristics are used by said transmission in a  
system, wherein all of said means are adapted for a  
respective collective measurement.
2. A device according to claim 1, wherein said
- 15 transmission characteristics comprise an information  
transfer capability information.
3. A device according to claim 1, further comprising  
evaluation means for detecting and identifying each
- 20 respective dependencies of said system resource usage by  
evaluating measurement results of said three measuring  
means.
4. A device according to claim 1, wherein said device is
- 25 part of a switching center of said communication network.
5. A device according to claim 1, wherein said device is  
part of a base-station subsystem of said communication  
network.
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6. A device according to claim 1, wherein said  
transmission contains high speed circuit switched data.

7. A device according to claim 1, wherein said transmission contains data which is channel coded according to Enhanced Data rates for GSM Evolution.

- 5 8. A method for measuring a usage of system resources in a communication network, said method comprising the step of

measuring parameters of circumstances of a transmission in a system, said parameters being at least  
10 radio resources used by said transmission in a system, data service units used for said transmission in a system, and transmission characteristics used by said transmission in a system, wherein said measuring is carried out collectively.

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9. A method according to claim 8, wherein said transmission characteristics comprise an information transfer capability information.

- 20 10. A method according to claim 8, further comprising the step of

detecting and identifying each respective dependencies of said system resource usage.

- 25 11. A method according to claim 8, wherein said measurements are carried out in a switching center of said communication network.

12. A method according to claim 8, wherein said  
30 measurements are carried out in a base-station subsystem of said communication network.

13. A method according to claim 8, wherein said transmission contains high speed circuit switched data.

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14. A method according to claim 8, wherein said transmission contains data which is channel coded according to Enhanced Data rates for GSM Evolution.

- 5 15. A method for dimensioning system resources for a usage by transmissions in a system, said method comprising the steps of

determining circumstances of said transmissions in a system, wherein said determination is based on results of  
 10 one of the methods according to claims 8 and 10, respectively, and wherein in said determination step also changes of said circumstances during said transmissions are determined;

calculating an intensity of data traffic in a  
 15 communication network from reservation times of said data service units used by said transmissions and from release times of said transmissions, considering also a change of a radio channel configuration therein by updating said calculation, wherein said calculation step is performed  
 20 separately for each of said circumstances of said transmissions;

determining each dependence present between said results of said measurements, said determination steps and said calculation steps;

- 25 generating statistics including said results of said measurement steps, said determination steps and said calculation steps; and

processing said generated statistics for dimensioning said system resources for said usage by said  
 30 transmissions in a system.

16. A method according to claim 15, wherein said calculation step is performed separately for each parameter of said circumstances of said transmissions.